# Instructional Leadership and the Common Core State Standards

#### Overview of the Module

- Knowledge to lead implementation of the Common Core State Standards.
- Vision to integrate the implementation of the Common Core
   State Standards into broad education improvement efforts.
- Metrics to clearly describe what successful progress in implementation looks like and facilitates a flexible cycle of change.
- Build capacity so that all members of the education landscape are learning together.
- Stay engaged to keep informed of the latest developments and resources.

### 1. Knowledge: Common Core State Standards Overview *RATIONALE, PRINCIPLES, AND SHIFTS*

#### 2. Vision

AN OPPORTUNITY TO BRING FOCUS AND COHERENCE

#### 3. Metrics

CLEAR GOALS, A PICTURE OF PROGRESS, AND A COMMITMENT TO MONITOR AND ADJUST

### 4. Build Capacity

SUPPORT A LEARNING ORGANIZATION IN WHICH LEARNING TOGETHER IS VALUED

### 5. Stay Engaged

THE WORK IS DEVELOPING. STAY ENGAGED AND CONTINUE LEARNING.

### Rationale for the CCSS

- Declining US competitiveness with other developed countries
- NAEP performance that is largely flat over the past 40 years in 8th grade
- Slight improvement at the 4th grade level
- Slight decline at the high school level
- High rates of college remediation

### Principles of the CCSS

- Aligned to requirements for college and career readiness
- Based on evidence
- Honest about time

## Common Core State Standards for Mathematics: *Key Shifts*

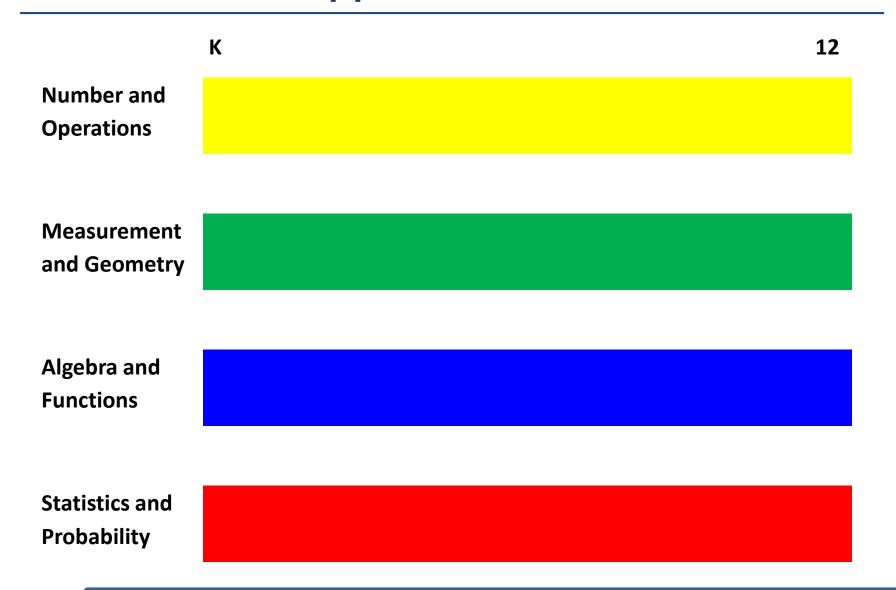
### **Mathematics: 3 Shifts**

**1. Focus:** Focus strongly where the standards focus.

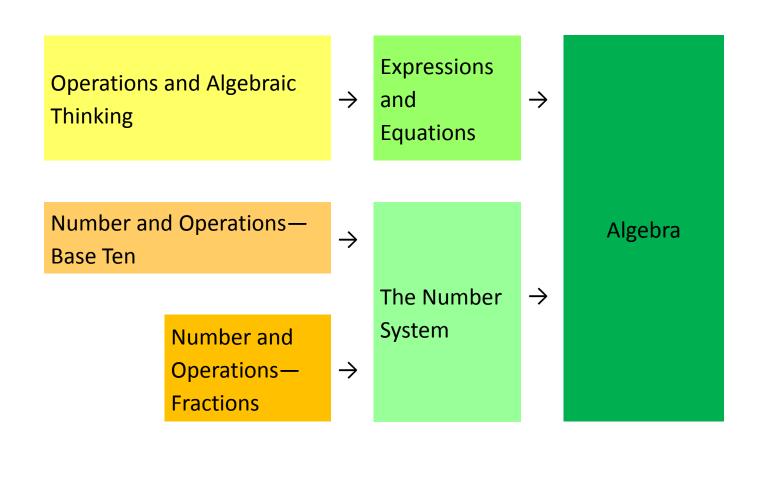
## Shift #1: Focus Strongly where the Standards Focus

- Significantly narrow the scope of content and deepen how time and energy is spent in the math classroom.
- Focus deeply on what is emphasized in the standards, so that students gain strong foundations.

### Traditional U.S. Approach



## Focusing Attention Within Number and Operations



10

**High School** 

4

### **Key Areas of Focus in Mathematics**

Grade	Focus Areas in Support of Rich Instruction and Expectations of Fluency and Conceptual Understanding
K-2	Addition and subtraction – concepts, skills, and problem solving and place value
3–5	Multiplication and division of whole numbers and fractions – concepts, skills, and problem solving
6	Ratios and proportional reasoning; early expressions and equations
7	Ratios and proportional reasoning; arithmetic of rational numbers
8	Linear algebra and linear functions

### **Mathematics: 3 Shifts**

- **1. Focus:** Focus strongly where the standards focus.
- 2. Coherence: Think across grades, and link to major topics

## Shift #2: Coherence: Think Across Grades, and Link to Major Topics Within Grades

- Carefully connect the learning within and across grades so that students can build new understanding on foundations built in previous years.
- Begin to count on solid conceptual understanding of core content and build on it. Each standard is not a new event, but an extension of previous learning.

### Coherence: Think Across Grades

Example: Fractions

"The **coherence** and sequential nature of mathematics dictate the foundational skills that are necessary for the learning of algebra. The most important foundational skill not presently developed appears to be proficiency with fractions (including decimals, percents, and negative fractions). The teaching of fractions must be acknowledged as critically important and improved before an increase in student achievement in algebra can be expected."

Final Report of the National Mathematics Advisory Panel (2008, p. 18)

### Coherence: Link to Major Topics Within Grades

Example: Data Representation

Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.

Standard 3.MD.3

### Coherence: Link to Major Topics Within Grades

Example: Geometric Measurement

Geometric measurement: understand concepts of area <u>and relate</u> area to multiplication and to addition.

3.MD, third cluster

### **Mathematics: 3 Shifts**

- **1. Focus:** Focus strongly where the standards focus.
- 2. Coherence: Think across grades, and link to major topics
- 3. Rigor: In major topics, pursue conceptual understanding, procedural skill and fluency, and application

### Shift #3: Rigor: In Major Topics, Pursue Conceptual Understanding, Procedural Skill and Fluency, and Application

- The CCSSM require a balance of:
  - Solid conceptual understanding
  - Procedural skill and fluency
  - Application of skills in problem solving situations
- Pursuit of all three requires equal intensity in time, activities, and resources

### Required Fluencies in K-6

Grade	Standard	Required Fluency
K	K.OA.5	Add/subtract within 5
1	1.OA.6	Add/subtract within 10
2	2.OA.2 2.NBT.5	Add/subtract within 20 (know single-digit sums from memory) Add/subtract within 100
3	3.OA.7 3.NBT.2	Multiply/divide within 100 (know single-digit products from memory) Add/subtract within 1000
4	4.NBT.4	Add/subtract within 1,000,000
5	5.NBT.5	Multi-digit multiplication
6	6.NS.2,3	Multi-digit division Multi-digit decimal operations

### Standards for Mathematical Practice

- Make sense of problems and persevere in solving m.
- 2. Reason abstractly and quantitatively.
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics.
- 5. Use appropriate to stategically.
- 6. Attend to presion
- 7. Look for a make use of structure.
- 8. Lok or and express regularity in repeated reasoning.

You have just purchased an expensive Grecian urn and asked the dealer to ship it to your house. He picks up a hammer, shatters it into pieces, and explains that he will send one piece a day in an envelope for the next year. You object; he says "don't worry, I'll make sure that you get every single piece, and the markings are clear, so you'll be able to glue them all back together. I've got it covered." Absurd, no? But this is the way many school systems require teachers to deliver mathematics to their students; one piece (i.e. one standard) at a time. They promise their customers (the taxpayers) that by the end of the year they will have "covered" the standards.

> ~Excerpt from *The Structure is the Standards* Phil Daro, Bill McCallum, Jason Zimba

### **ACTIVITY**

Reflecting on the Shifts for Mathematics

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## Visionary Leadership: CCSS as an Opportunity to Lead with Focus and Coherence

- Clear vision of college and career readiness for all students.
- Cannot be viewed as one more thing to do.
- Leadership decisions are filtered through the shifts.

### **Strategies for Alignment**

#### Key questions to be asking:

- What are you including as questions on local assessments?
- What do you value in PD?
- What do you look for in teacher observations?
- How are you spending:
  - Money?
  - Time?
  - Energy?
- How are you revising or revisiting policies and procedures:
  - Calculator usage
  - Classroom libraries

### **Discussion**

What policies, procedures, and/or work within your district, school, or classroom are impacted by the Common Core State Standards?

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### **Metrics: What it Looks Like**

- Directly connected to visionary leadership.
- Everyone in the system needs clarity around the goals – what it will look like when implemented.
- Metrics let us know what progress we are making in meeting goals.
- The system must be set up to collect progress data, and also monitor and adjust.

### **Areas to Watch for Progress**

In relation to the shifts and your goals, consider:

- Teacher knowledge and practice
- Instructional materials and resources
- Student work

### **Examples of Metrics**

	ELA/Literacy	Mathematics
Classroom Materials and Instructional Resources	Reading lists are appropriately balanced between nonfiction and literary text.	Materials are focused ERASE!
Teacher Knowledge and Practice	At least 80% of questions are text-dependent.	Teachers have a deep understanding of the major work of their grade.
Student Work	Student work demonstrates close encounters with text - demanding evidence through writing.	Student work demonstrates fluency and deep understanding in the major work of the grade.

### **ACTIVITY**

**Developing Metrics** 

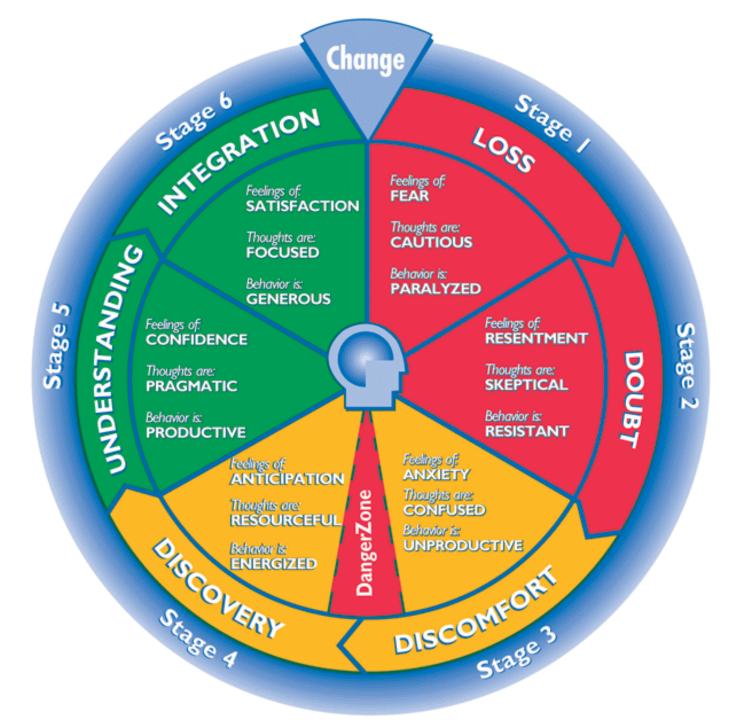
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### **Build Capacity**

- You are acting as lead learner this content is new to everyone.
- Not an issue of compliance.
- Teachers need opportunities to learn and process these expectations – not just a new scope and sequence.
- Everyone in the system needs to appreciate this initiative for what it is, an opportunity to reform education.
- Recognize this as hard work, worth doing.



### **ACTIVITY**

Building Capacity for the Work

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### Stay Engaged

- Unleash the potential of *Common* in Common Core State Standards
- Professional organizations
- State leadership

### **Discussion/Activity**

Using your understanding of the shifts and implications for instructional leadership, identify additional web resources to engage:

- District-level personnel
- School-level administrators
- Instructional support
- Teachers
- Students
- Parents

Describe the source of information as well as the evidence which demonstrates alignment to the standards.